DOCUMENT RESUME

ED 184 095 CS 005 343

AUTHOR Corwin, Sylvia; Mortensen, Erik
TITLE Improving Visual Perceptual Skills in Art Classes in Secondary Schools, School Year 1975-1976.
INSTITUTION New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation.
PUB DATE [76]
NOTE 21p.; For related documents see CS 005 342 and ED 144 029-032.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Art Activities; *Art Education; Integrated Activities; *Interdisciplinary Approach; *Program Effectiveness; *Program Evaluation; *Reading Achievement; *Reading Instruction; Reading Research; Remedial Reading; Secondary Education; Validated Programs
IDENTIFIERS *Reading Improvement Through Art

ABSTRACT

The Reading Improvement Through Art (RITA) program, an interdisciplinary approach to remedial reading that combines reading and visual arts activities, was evaluated in nine New York City high schools. A total of 240 students participating in the program were pre and posttested during the fall 1975 and spring 1976 semesters. The results of this evaluation showed that the participating students made exceptional growth in reading, growth that was beyond statistical expectations. The school attendance of the participating students also showed improvement. Based on these data and comments from reading teachers who participated in RITA, the program received a positive evaluation, with recommendations for its continuation and expansion. (RL)

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ED184095

EVALUATION REPORT

Function No. 09-63604

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IMPROVING VISUAL PERCEPTUAL SKILLS IN ART CLASSES IN SECONDARY SCHOOLS

School Year 1975-1976

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Sylvia Corwin, Project Director
Erik Mortensen, Ed.D.

R I T A
Reading Improvement Through Art
John F. Kennedy High School
99 Terrace View, Bronx, N. Y. 10483

An evaluation of a New York City school district educational project funded under Title III of the Elementary and Secondary Education Act of 1965 (PL 89-10) performed for the Board of Education of the City of New York for the 1975-76 school year.

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DR. ANTHONY J. POLEMENI, DIRECTOR

BOARD OF EDUCATION OF THE CITY OF NEW YORK
OFFICE OF EDUCATIONAL EVALUATION
110 LIVINGSTON STREET, BROOKLYN, N. Y. 11201

CS005343

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CHAPTER I: THE PROGRAM

This pilot program, entitled Improving Visual Perceptual Skills in Art Classes in Secondary Schools, also referred to as Reading Improvement Through Art, R.I.T.A., was funded under ESEA Title III for the 1975-1976 school year, (July 1, 1975 - June 30, 1976), to offer an estimated 500 eligible 9th and 10th grade high school students, in eight public schools and one parochial high school, who are performing at least two years below grade level in reading, improvement in reading and reading skills through motivation and interest in visual, non-verbal creative art workshop activities.

As proposed, two different groups of eligible students would be placed in the program at the beginning of the fall term of 1975 and the beginning of the spring term of 1976. Each student was to receive one forty-minute period of instruction daily. A reading specialist would visit the art classes, at least twice a week, to diagnose the reading programs, to provide remedial and corrective work, and to collaborate with the art teacher. Each student would complete a minimum of 5 art projects. A reading corner would be set up in each art room where materials suitable to the reading needs of the students would provide information relevant to the art techniques, historical background and master artists related to the students' projects. Students would maintain a written record of discussions, investigations, and readings related to artists and the creative process in order to develop reporting and writing skills. Art teacher and reading specialist would assemble appropriate reading materials for interest, for appreciation, and for information in the reading corner of the art room for each art activity. A course outline will be published for use in 10th year required art courses.

Coordinators of the Guggenheim and the Cloisters Reading Through the Arts funded programs will direct teacher training and curriculum writing workshops in order to continue the successful practices of many years of experience.

R.I.T.A. was developed to attack reading problems of teenagers in New York City. The major objectives were to improve reading and comprehension ability of participating students and to raise the level of reading proficiency to the 8.0 grade level criterion necessary for diploma qualification in New York City, to motivate and stimulate reading through visual arts activities, and to build self-confidence through creation of art projects. As a result of participating in the program, the reading comprehension grade equivalent of the student participants would show a statistically significant difference between the real post-test score and the anticipated post-test score as measured by the California Reading Achievement Test. Level 3 (Form A and Form B) of the California Reading Achievement were to be administered initially and finally: the pre-test during the first two weeks of the program and the post-test during the last two weeks of the program, in the fall and spring semesters.

In addition, it was proposed that the program would seek to determine whether, as a result of participation, teachers would show an increase in teaching effecvtiveness.

CHAPTER II: EVALUATIVE PROCEDURES

As proposed, there are two program objectives, viz.:

Program Objective No. 1

As a result of participating in the program, the reading (compre-

hension and vocabulary) grade equivalent of the students will show a statistically significant difference between the real post-test score and the anticipated post-test score as measured by the California Reading Achievement Test.

Program Objective No. 2:

As a result of participation in the program, the participating teachers will show an increase in teaching effectiveness.

There were a total of three proposed evaluative objectives:

Evaluation Objective No. 1:

To determine whether as a result of participation in the program, the reading comprehension grade equivalent of the students will show a statistically significant difference between the real post-test and the anticipated post-test score.

1.1 Subjects: All participants in the program.

1.2 Methods and Procedures: Data will be analyzed by the "real (treatment) post-test vs. anticipated (without treatment) post-test design as follows:

Step 1. Obtain each pupil's pre-test grade equivalent.

Step 2. Subtract 1 (since most standardized tests start at 1.0).

Step 3. Divide the figure obtained in Step 2 by the number of months the pupil has been in school to obtain a hypothetical (historical regression) rate of growth per month.

Step 4. Multiply the number of months of Title III treatment by the historical rate of growth per month.

Step 5. Add the figure obtained in Step 4 to the pupil's pre-test grade equivalent (Step 1).

Step 6. Test the difference for significance between the group predicted post-test mean and the obtained post-test mean correlated t - ratio.

1.4 Time Schedule: Pre-test will be administered during the first two weeks of the program, of the fall and spring terms; post-test during the last two weeks of the program, of the fall and spring term.

Evaluation Objective No. 2:

To determine whether as a result of participation, there will be an increase of teaching effectiveness by the participating teachers.

2.1 Subjects: All participating teachers in the program.

2.2 Methods and Procedures: An appropriate check list of items dealing with teaching effectiveness will be developed by the project staff and supervisory personnel. A rating scale from one to ten will be applied to each item, the descriptive content of the rating will be: never, seldom, sometime, usually, and always.

2.3 Data Analysis: An appropriate non-parametric test for statistical significance will be applied to the pre and post ratings, for all items as well as for selected items which are felt to be important for the program operation.

2.4 Time Schedule: Initial administration: November 1 to November 15, 1975; February 1 to February 15, 1976. Final administration: January 15 through January 30, 1976; May 15 through May 30, 1976.

Evaluation Objective No. 3:

To determine the extent to which the program, as actually carried out, coincided with the program as described in the project proposal

While evaluation objectives No. 1 and No. 3 were implemented, as proposed, it was determined by the Office of Educational Evaluation, Board of Education of the City of New York, that, due to the great difficulties in measuring teaching effectiveness with objectivity in combination with budget limitations, this objective be eliminated. However, it was agreed that some unscheduled information regarding attendance data would be provided in the final report. See attached letter in the Appendix.

CHAPTER III: FINDINGS

FALL TERM The program was implemented as proposed. Communication between project personnel began in June with the launching meeting at The Guggenheim Museum. An important consideration in evaluating the results for the nine pilot schools during the fall term is the fact that classes started in all schools on Monday, September 22, 1975, instead of on the expected date, Monday, September 8th. This loss of instruction time was due to the then ongoing teachers' strike. The delay in starting the program caused some problems in the administration of the program. Furthermore, due to city-wide personnel cutbacks, 5 art teachers were trained and installed during

the course of the project year to replace teachers excessed because of seniority. It should be noted that the program was able to replace certain key personnel lost as a result of enforcement of seniority regulations (in total, 14 art teachers were trained and implemented for the project although 9 were in the original proposal). Loss of continuity of personnel introduced procedural handicaps. A total of 185 students participated during the fall term distributed among the following schools:

Public High Schools

	Students		Students
Christopher Columbus High School 925 Astor Avenue Bronx, New York 10469	23	John F. Kennedy High School 99 Terrace View Avenue Bronx, New York 10463	22
Benjamin Franklin High School 116th Street & F.D.R. Drive New York, New York 10029	26	Erasmus Hall High School 911 Flatbush Avenue Brooklyn, New York 11226	27
Walton High School Reservoir Avenue & 196th Street Bronx, New York 10468	18	South Shore High School 6565 Flatbush Avenue Brooklyn, New York 11236	15
Beach Channel High School 100-00 Beach Channel Drive Rockaway, New York 11694	24	Washington Irving High School 40 Irving Place New York, New York 10003	21

Non-Public High School

	Students
Cardinal Spellman High School 1001 Needham Avenue Bronx, New York 10466	9

Christopher Columbus High School was in the midst of ethnic conflict, at the beginning of the school year, which resulted in unusual secur-

ity measures and parents withholding student attendance. Because the art teacher was excessed as of February 1, 1976, the program was offered to Lehman High School in the Bronx and requested by Newton High School in Queens. However, due to the continuing budget crisis, no principal was able to organize a class limited to 25 students. The project, therefore, proceeded, in the spring term, with 8 participating high schools. A budget modification was submitted on February 23, 1976 to redistribute funds earmarked for Christopher Columbus High School.

The appointed project assistant attended a summer training program under the supervision of the project director at the Guggenheim Museum's Reading Through the Arts program, at I.S. 29, Manhattan.

At Benjamin Franklin High School, it required a little more than the other schools to clarify the project goals satisfactorily to both the reading and the art personnel.

At Walton High School, the prevailing revolving door attendance policy plus the chronic truancy syndrome caused the project director to postpone assignment of a reading teacher.

Beach Channel High School was the first to feel the domino effect of excessing. The master art teacher was laid off on November 4, 1975. The replacement teacher, who had never taught in high school, took over for 9 weeks, performed well but was laid off on February 2, 1976. Beach Channel is organized according to special interests. The Ceramics/Craft class, formed early in 1975, was converted into Reading Improvement Through Art. The tradition of student self-determination in this school generated some resentment at having free electives altered and may have been an inhibiting factor.

Student teachers and their supervisors from Pratt Institute, the College of Mount Saint Vincent and Lehman, Brooklyn and Hunter Colleges provided considerable volunteer supportive services.

At Cardinal Spellman, the only participating non-public school of the New York Catholic Archdiocese, the program was implemented without problems. All participating students were from the 10th grade. Their reading levels were consistently higher than those of the 8 participating public schools measured by both pre and post tests (Level 5 as against Level 3 for the other schools). The project director initiated a change of precedent. In the spring term, for the first time, a student teacher was assigned from the College of Mount Saint Vincent to assist in the program.

SPRING TERM

During the regents week recess, the Chancellor released the project participants for 3 days to participate in a three day training session at John F. Kennedy High School. The spring term started on time with a total of 161 students in the following schools:

Public High Schools

	Students		Students
John F. Kennedy High School 99 Terrace View Avenue Bronx, New York	25	Benjamin Franklin High School 116th Street & F.D.R. Drive New York, New York 10029	21
Erasmus Hall High School 911 Flatbush Avenue Brooklyn, New York 11226	22	Walton High School Reservoir Avenue & 196 Street Bronx, New York 10468	18
South Shore High School 6565 Flatbush Avenue Brooklyn, New York 11236	22	Beach Channel High School 100-00 Beach Channel Dr. Rockaway, New York 11694	21
Washington Irving High School 40 Irving Place New York, New York 10003	25		

Non-Public High School

	Students
Cardinal Spellman High School 1001 Needham Avenue Bronx, New York 10466	

There were 24 fewer students in the program during the spring term, in large measure due to the fact that Christopher Columbus High School, as mentioned above, could not continue participation: by and large, many of the difficulties that had been experienced during the fall term had been overcome and the program was implemented without problems.

TEST RESULTS

FALL TERM

According to Evaluation Objective No. 1, the project would determine whether as a result of participation in the program, the reading compre-

hension grade equivalent of the students would show a statistically significant difference between the post-test scores and the anticipated post-test scores as measured by the California Reading Achievement Test. The appropriate form and level of the test was administered: the pre-test during the first two weeks of the program and the post-test during the last two weeks of the program of the fall term.

A total of 121 students from the 9th and 10th grades were tested and analyzed. In addition, two 11th grade students were tested but not analyzed, as the grade sample was too small. Reasons for other students not to be tested were:

TABLE 1

STUDENTS PARTICIPATING IN PROGRAM				
REASON	9th Grade	10th Grade	11th Grade	TOTAL
Absent on either pre- or post-test	14	30	1	45
Transferred out	7	4	1	12
No reason	1	0	0	1
Non-English-speaking	1	1	0	2
Late admittance	1	1	0	2
Totals	24	36	2	62

Consequently, there were 64 (62 + 2) not tested or analyzed, representing 34% of the total population. It should be noted that because of the teacher's strike in September it was impossible for the program to replace stu-

dents who were dropped in September from pilot class registers (which were organized the previous June) at the same time that the teachers were being excessed and entire schools were being organized.

TABLE 2

PRE- AND POST-TEST MEAN GRADE EQUIVALENTS FOR TOTAL READING ON THE CALIFORNIA ACHIEVEMENT TEST FOR GRADES 9 AND 10:

Grade	N	Pre-test Mean	Expected Post-test Mean	Actual Post-test Mean	t value	Gain
9	40	4.46	4.62	5.52	4.41*	1.06
10	81	5.99	6.19	6.72	5.00*	.79

* Both t values are significant at the .001 level.

COMMENTS

The pre-test mean grade equivalents for both grades were approximately 4 to 5 years below grade level. The students in the program were obviously in need of a reading program.

Post-testing took place from 3 to 4 months after the pre-testing. The 9th grade student showed a mean grade equivalent gain of 1.06, or over 1 year's growth in 4 months. The 10th grade students showed a mean grade equivalent gain of .79, or almost 8 month's growth in 4 months. The growth grades not only significantly beyond statistical expectations, they were beyond growth normally expected in a full year's program.

SPRING TERM

The second group of students were tested in February and May, 1976, using the same procedure as indicated above. A total of 119 students from the 9th, 10th and 11th grades were tested and analyzed. In addition, four 12th grade students were tested but not analyzed, as the grade sample was too small. Reasons for other students not to be tested were:

TABLE 3

STUDENTS PARTICIPATING IN PROGRAM

REASON	9th Grade	10th Grade	11th Grade	12th grade	TOTAL
Absent on either pre- or post-test or truant	5	15	6	0	26
Transferred out or dropped	3	3	0	0	6
No analysis possible (incomplete data)	0	0	1	0	1
Totals	8	18	7	0	33

TABLE 4

TEST RESULTS (SPRING)

PRE- AND POST-TEST MEAN GRADE EQUIVALENTS FOR TOTAL READING ON THE CALIFORNIA ACHIEVEMENT TEST FOR GRADES 9, 10 AND 11

Grade	N	Pre-test Mean	Expected Post-test Mean	Actual Post-test Mean	t value	Gain
9	17	5.42	5.56	6.34	3.00*	.92
10	82	6.29	6.47	7.29	5.86**	100
11	20	5.99	6.14	6.85	4.18**	.86

* t value is significant at the .01 level.

** Both t values were significant at the .0001 level.

COMMENTS

Approximately three months elapsed between pre- and post-testing. As with the first wave of students tested in the fall, the vast majority of students in the program were in need of a reading program. The 9th grade pre-test mean grade equivalent was 4 years below average. Pre-test results for the other grades were no better.

The 9th grade students showed a mean grade equivalent of .92 over a three month span. The 10th grade students showed a mean grade equivalent gain of one year over a three-month span. The 11th grade students' gain was almost nine months over a three month span. All grade levels showed exceptional growth.

CHAPTER IV: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The accomplishments of the pilot program, Improving Visual Perception in Art Classes in Secondary Schools, also referred to as Reading Improvement Through Art, R.I.T.A., were extremely satisfactory and impressive. R.I.T.A. satisfactorily fulfilled the major objective set for this year of operation. The growth grades of all grades participating in the project showed exceptional growth. The growth grades were not only significantly beyond statistical expectations, they were beyond growth normally expected in approximately a full year's program.

The Evaluator visited several different classes and observed student and teacher performances. He found that the teachers were most enthusiastic about the program and expressed great satisfaction with the concept of team teaching which they felt was professionally rewarding. It was also apparent that the students, in general, liked the programs and appeared to be deeply engrossed in their activities. Although the project did not call for any evaluation of attendance records of participating students, an analysis has been made of these records and a comparison has been made with the average percentage of attendance by students in the same schools during 1974-1975.

The table below is an analysis of attendance of project participants who were pre- and post-tested:

TABLE 5

BRONX	Daily School-wide Attendance 1974-1975	R.I.T.A. Fall, 1975	% Gain	R.I.T.A. Spring, 1976	% Gain
John F. Kennedy	73.84	86.36	12.52	89.12	15.28
Christopher Columbus	75.28	85.79	10.51		
Walton	62.57	77.5	14.93	72.88	10.31
Cardinal Spellman					
MANHATTAN					
Washington Irving	71.98	86.67	14.69	90.55	18.57
Benjamin Franklin	45.97	70.38	24.41	91.36	45.39
BROOKLYN					
Erasmus Hall	76.95	87.48	10.53	89.27	12.32
South Shore	71.64	91.31	19.67	80.83	9.19
QUEENS					
Beach Channel	81.85	83.64	1.78	91.69	9.84

It is evident that this preliminary attendance data is incomplete. A long term study of attendance patterns for this troubled population would be desirable. However, the available data shows that the students who did complete R.I.T.A. maintained a higher attendance record in all instances than the average percent of attendance of the school population at their re-

spective schools during the 1974-1975 school year.

In order to determine factors that may have contributed to the success of this program, the Evaluator solicited statements from some of the reading teachers. These are a few selected statements:

> "Reading in the secondary school has long been proven to be most effective when associated with a content area. One noted teacher at Hofstra University taught his course "Teaching Reading in the Secondary Schools" by emphasizing reading in the content areas and deemphasizing the remedial reading teacher, basic reading skills without emphasizing content areas. This type of teacher presented a very sterile format for the student, without any motivation for learning. However, a reading teacher, through R.I.T.A., offers these same skills but in a self-motivating, stimulating, and highly experiential content area, namely art. The program teaches reading skills through concrete experiences and concrete goals."

> "Because the reading reinforced the art concepts by introducing new syntactical and semantic structure, the students ceased to resist this new approach to learning. Most discovered that they could master more difficult reading levels of vocabulary and comprehension usage because of the direct and concrete art experience. The repetition of reading, writing, and doing reinforced as well as clarified new ideas."

> "Small group activity and individualization are important aspects of the R.I.T.A. program. While neither small group activity nor individualization are particular to the R.I.T.A. program, the set up of the art room allows the reading teacher to incorporate both of these elements in the program. Individualization is at home in an art class by the very nature of how an art class normally operates. This allows the reading teacher much freedom in helping students who either need more help or who indicate an interest in doing more than expected of them."

> "Finally, as a teacher it is so gratifying to see the happiness of students over their successes. Their improvement is a proof of both their worth and their potential and a spur to further improvement. Hopefully, this program will not be discontinued but expanded to include a double art class which will allow an emphasis on writing skills under the reading teacher's guidance. This would be a natural outgrowth of the present emphasis on reading and provide improvement in the neglected and much needed skill of writing."

On the basis of several visits to the program, including participation in two workshop meetings with all the art and reading teachers, it is the opinion of the Evaluator that this program has been implemented in a highly satisfactory manner. All records have been kept in a clear and concise manner, which has greatly facilitated the evaluation of the program. All project participants have demonstrated ability and determination to surmount operational difficulties. The assistant to the Director and part-time secretary provided outstanding supportive, payroll, supplies and miscellaneous services. Appreciation was also expressed to the Office of High Schools which released project participants for 3 full days of curriculum writing workshops in January at John F. Kennedy High School. These days were reported as having been important to sustaining the project momentum.

The following recommendations were made for the purpose of suggesting specific ways in which a sound program may be further improved. They represent a compilation of what the Evaluator considers to be most pertinent on the basis of evaluation:

1. R.I.T.A. program should be recycled. The overall evaluation of the 1975-1976 program was exceedingly favorable and pointed to the need for the continuation of the program.

2. Full funding of the program should be continued.

3. Funding should be increased and allocated specifically for:

   (a) Expanding the program to other schools in New York City.

   (b) Adding critically needed staff personnel.

   (c) Adding more instruction time per week in the R.I.T.A. program.

(d) Expanding cooperation with student teacher training institutions interested in the new approach to reading improvement.

4. The printing and distributing of the course of study for the use of required art classes in New York City High Schools should be completed on or before October 1, 1976.